What is claimed is:

1. A method of enhancing sensitivity and specificity of an assay measuring enzymatic activity in a sample comprising measuring enzymatic activity in the sample in the presence and absence of a specific inhibitor of the enzymatic activity.

2. A method of measuring carboxypeptidase A levels in a biological fluid comprising:

(a) contacting a biological fluid with a carboxypeptidase A substrate in the presence and absence of a carboxypeptidase A specific inhibitor; and

(b) measuring changes in optical density resulting from hydrolysis of the carboxypeptidase A substrate by carboxypeptidase A in the biological fluid in the presence and absence of the carboxypeptidase A specific inhibitor.

3. A method of diagnosing acute pancreatitis in a patient suspected of suffering from acute pancreatitis comprising:

(a) measuring carboxypeptidase A levels in a biological fluid from a patient by detecting changes in optical density resulting from hydrolysis of a carboxypeptidase A substrate by any carboxypeptidase A in the biological fluid in the presence and absence of a carboxypeptidase A specific inhibitor; and

(b) determining whether the measured levels of carboxypeptidase A in the biological fluid of the patient are elevated over levels in biological fluid from a healthy control population.

4. A method of measuring total carboxypeptidase A levels in a biological fluid comprising:

(a) converting any procarboxypeptidase A in a biological fluid to carboxypeptidase A by addition of clostripain;

(b) contacting the biological fluid with a carboxypeptidase A substrate in the presence and absence of a carboxypeptidase A specific inhibitor; and

(c) measuring changes in optical density resulting from hydrolysis of the carboxypeptidase A substrate by carboxypeptidase A in the biological fluid in the presence and absence of the carboxypeptidase A specific inhibitor.

5. A method of diagnosing early stage pancreatic cancer in a patient comprising:

(a) converting any procarboxypeptidase A in a biological fluid obtained from a patient to carboxypeptidase A by addition of clostripain;

(b) measuring total carboxypeptidase A levels in the biological fluid by detecting changes in optical density resulting from hydrolysis of a carboxypeptidase A substrate by any carboxypeptidase A in the biological fluid in the presence and absence of a carboxypeptidase A specific inhibitor; and

(c) determining whether the measured levels of total carboxypeptidase A in the biological fluid of the patient are increased as compared to total carboxypeptidase A levels in a healthy population due to elevated procarboxypeptidase A in the biological fluid.